

**REMARKS**

Claims 1-26 were pending in this application.

Claims 1-26 have been rejected.

No claims have been amended.

Claims 1-26 remain pending in this application.

Reconsideration and full allowance of Claims 1-26 are respectfully requested.

**I. REJECTION UNDER 35 U.S.C. § 103**

The Office Action rejects Claims 1-5, 7-9, 11-17, and 21-26 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,324,387 to Kamgar et al. (“*Kamgar*”) in view of U.S. Patent No. 6,961,552 to Darabi et al. (“*Darabi*”) and in further view of U.S. Patent No. 6,822,696 to Talmola et al. (“*Talmola*”). The Office Action rejects Claims 6, 10, and 18-20 under 35 U.S.C. § 103(a) as being unpatentable over *Kamgar*, *Darabi*, and *Talmola* in further view of U.S. Patent No. 6,249,686 to Dvorkin et al. (“*Dvorkin*”). These rejections are respectfully traversed.

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. (*MPEP* § 2142; *In re Fritch*, 972 F.2d 1260, 1262, 23 U.S.P.Q.2d 1780, 1783 (Fed. Cir. 1992)). The initial burden of establishing a *prima facie* basis to deny patentability to a claimed invention is always upon the Patent Office. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Piasecki*, 745 F.2d 1468, 1472, 223 U.S.P.Q. 785, 788 (Fed. Cir. 1984)). Only when a *prima*

*facie* case of obviousness is established does the burden shift to the Applicant to produce evidence of nonobviousness. (*MPEP* § 2142; *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (*Fed. Cir.* 1992); *In re Rijckaert*, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (*Fed. Cir.* 1993)). If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the Applicant is entitled to grant of a patent. (*In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (*Fed. Cir.* 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (*Fed. Cir.* 1985)).

A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. (*In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (*Fed. Cir.* 1993)). To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed invention and the reasonable expectation of success must both be found in the prior art, and not based on the Applicant's disclosure. (*MPEP* § 2142).

**A. Claims 1-5, 7-9, 11-17, 22, 24, and 26**

Claims 1, 7, and 15 recite increasing a current supplied to one or more first amplifiers and/or allowing one or more second amplifiers to amplify an incoming signal “in response to” an

“amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.”

The Office Action ignores the fact that the cited references use completely different techniques to adjust the operation of an amplifier in different ways. The Office Action cannot simply take random parts of these techniques and combine them to reach the Applicant’s claimed invention as asserted in the Office Action.

*Kamgar* recites a technique that involves comparing an “RSSI” signal to a voltage reference “ $T_r$ ” and comparing a “Pilot Power” signal to a voltage reference “ $T_p$ .” (*Col. 4, Lines 44-53*). The only action taken in *Kamgar* when one value exceeds a first threshold and another value fails to exceed a second threshold involves decreasing the gain of an amplifier 105 (when  $RSSI > T_r$  and  $Pilot\ Power < T_p$ ). (*Col. 5, Line 26*). This clearly does not disclose, teach, or suggest allowing one or more second amplifiers to amplify an incoming signal in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.” The Office Action also fails to show that *Kamgar* increases a current to one or more first amplifiers in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.”

*Darabi* recites a technique that involves using the signal strength of a wideband channel (which includes a desired signal and interference) and the signal strength of only the desired signal. (*Col. 8, Lines 23-30*). The only action taken in *Darabi* when one value exceeds a first threshold and another value fails to exceed a second threshold involves decreasing the gain of an amplifier 304 when the desired signal is weak or moderate and the interference is strong. (*Col. 8,*

*Lines 46-49*). This is similar to the operations that occur in *Kamgar*. Again, this clearly does not disclose, teach, or suggest allowing one or more second amplifiers to amplify an incoming signal in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.” The Office Action also fails to show that *Darabi* increases a current to one or more first amplifiers in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.”

The statement in the Office Action that *Darabi* “allows one amplifiers to amplify the incoming signal” is difficult to understand. The Office Action may be asserting that *Darabi* allows “one or more second amplifiers” to amplify an incoming signal as recited in Claims 1, 7, and 15. However, *Darabi* contains no such teaching or suggestion.

The portion of *Darabi* cited in the Office Action as support for this statement refers to an amplifier 304 in Figure 3 of *Darabi* and an amplifier 404 in Figure 4A of *Darabi*. (*Col. 8, Lines 23-65*). The Office Action may be attempting to assert that *Darabi* begins using the amplifier 404 in Figure 4A instead of or in addition to using the amplifier 304 in Figure 3 when certain conditions are met. This is factually incorrect.

The amplifier 404 in Figure 4A of *Darabi* is not a separate amplifier that is used instead of or in addition to the amplifier 304 in Figure 3 of *Darabi*. Rather, Figures 4A through 4C illustrate details regarding a specific embodiment of the receive circuitry of a receiver. (*Col. 8, Line 56 – Col. 10, Line 16*). *Darabi* specifically states that Figure 4A illustrates the “gain at the various stages of the receiver circuitry” and that Figure 3 illustrates a “receiver portion of a radio receiver.” (*Col. 3, Lines 45-49*). The circuitry shown in Figure 4A of *Darabi* therefore

represents part of the circuitry from Figure 3 of *Darabi*, not additional circuitry that is used along with the circuitry in Figure 3 of *Darabi*.

The Office Action cannot take the position that the amplifier 404 in Figure 4A of *Darabi* is somehow used instead of or in addition to the amplifier 304 in Figure 3 of *Darabi*. Nothing in *Darabi* indicates that these are separate amplifiers that can be used together or that the amplifier 404 can be used in place of the amplifier 304 under certain conditions.

*Talmola* recites a technique that involves adjusting a bias current provided to an amplifier 304 based on a bit error rate (BER) of a received digital signal. (*Col. 3, Lines 4-7*). *Talmola* never takes any action when one value exceeds a first threshold and another value fails to exceed a second threshold. Rather, *Talmola* decreases the bias current when  $BER \geq X$ , and *Talmola* increases the bias current when  $BER < X$  and  $BER \leq Y$ . (*Col. 3, Lines 8-33; Figure 5*).

*Kamgar* simply decreases the gain of an amplifier 105 when  $RSSI > T_r$  and Pilot Power  $< T_p$ . *Darabi* simply decreases the gain of an amplifier 304 when a desired signal is weak or moderate and an interference signal is strong. *Talmola* simply takes action when one threshold is exceeded or when two thresholds are not exceeded. None of these references makes any mention of increasing a current supplied to one or more first amplifiers in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.” Also, none of these references makes any mention of allowing one or more second amplifiers to amplify an incoming signal in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.”

The Office Action also provides an insufficient motivation or suggestion to combine the

references to reach the Applicant's claimed invention. *Kamgar* operates by comparing RSSI and pilot power values to thresholds. *Darabi* similarly operates by comparing two RSSI values to thresholds. In contrast, *Talmola* compares a single bit error rate value to multiple thresholds. There is nothing suggesting that the operations from *Talmola* (increasing or decreasing the bias current) can be combined with the RSSI/pilot power comparisons of *Kamgar* or the RSSI comparisons of *Darabi*. In other words, the Office Action simply assumes that a person skilled in the art would be motivated to adjust the bias current of an amplifier (as done in *Talmola*) based on the RSSI/pilot power comparisons of *Kamgar* and *Darabi*. This is improper.

The Office Action cites nothing in any reference showing how or why the bias current of the amplifier 105 in *Kamgar* should be increased (as done in *Talmola*) when  $RSSI > T_r$  and Pilot Power  $< T_p$  (the only time in *Kamgar* where an action occurs when one threshold is exceeded and another threshold is not exceeded). The Office Action also cites nothing in any reference showing how or why the bias current of the amplifier 304 in *Darabi* should be increased (as done in *Talmola*) when the desired signal is weak or moderate and the interference is strong (the only time in *Darabi* where an action occurs when one threshold is exceeded and another threshold is not exceeded).

The Office Action asserts that a person skilled in the art would be motivated to modify *Kamgar* and *Darabi* with *Talmola* because it would "reduce the power consumption of the receiver." This proposed motivation fails to explain why a person skilled in the art would increase a current supplied to an amplifier as disclosed in *Talmola* based on the comparisons done in *Kamgar* and *Darabi*. As noted above, the Office Action fails to show, for example, that

*Talmola* could be used to increase the bias current of an amplifier when  $RSSI > T_r$  and Pilot Power  $< T_p$  as taught by *Kamgar*.

At most, a person skilled in the art might be motivated to modify *Kamgar* and *Darabi* with *Talmola* so that a receiver:

- (i) compares RSSI/pilot power values or RSSI values to multiple thresholds and adjusts the gain of an amplifier; and
- (ii) compares a BER value to multiple thresholds and adjusts the bias current of an amplifier.

However, the Office Action fails to show that the threshold comparisons in (i) would be used with the actions in (ii). Without that showing, the Office Action cannot simply assume that the bias current adjustments in (ii) occur when one threshold is exceeded and another threshold is not as in (i).

The Patent Office chose to reject the claims under § 103, so the burden is on the Patent Office to show that a person skilled in the art would be motivated to combine these different control schemes to reach the Applicant's claimed invention. The Patent Office has not satisfied this burden.

For these reasons, the proposed *Kamgar-Darabi-Talmola* combination fails to disclose, teach, or suggest all elements of Claims 1, 7, and 15 (and their dependent claims).

**B. Claims 6, 10, and 18-20**

The Office Action acknowledges that *Kamgar*, *Darabi*, and *Talmola* fail to disclose a “switch” capable of coupling a power supply to at least one amplifier as recited in Claims 6, 10, and 18. The Office Action cites *Dvorkin* as disclosing these elements of Claims 6, 10, and 18 and asserts that it would be obvious to modify the proposed *Kamgar-Darabi-Talmola* combination with *Dvorkin*.

*Dvorkin* discloses the use of switches 30 and 70 to support the switching of an RF receiver between a cellular mode of operation and a PCS mode of operation. (*Col. 4, Lines 9-14; Figure 1*). Once again, the Office Action simply cites a reference and assumes that its control scheme can be incorporated into and used with the control schemes of *Kamgar*, *Darabi*, and *Talmola* to reach the Applicant’s claimed invention. This is improper.

*Dvorkin* controls the switches 30 and 70 based on “sensing the local oscillator inputs to the mixers for the cellular and PCS signal chains respectively, without the need for a separate control input for switching modes.” (*Col. 4, Lines 9-14*). The Office Action fails to explain how the opening and closing of switches based on local oscillator inputs to mixers can be incorporated into the control schemes of the other references, which use RSSI, pilot power, and BER values to control an amplifier.

For these reasons, the Office Action fails to show that the proposed *Kamgar-Darabi-Talmola-Dvorkin* combination discloses, teaches, or suggests all elements of Claims 6, 10, and 18 (and their dependent claims).



**C. Claims 21, 23, and 25**

Claims 21, 23, and 25 recite that “one or more second amplifiers” are allowed to amplify an incoming signal in response to an amplified incoming signal exceeding a first threshold and a desired signal not exceeding a second threshold (where “one or more first amplifiers” produce the “amplified incoming signal”).

The Office Action cites the same portions of *Darabi* (element 328 in Figure 3 and column 8, lines 23-65) discussed above. As noted above, these portions of *Darabi* simply disclose decreasing the gain of a single amplifier, not allowing one or more different or additional amplifiers to amplify a signal.

The only reference that discloses the use of multiple amplifiers is *Dvorkin*, which is not cited in the § 103 rejection of Claims 21, 23, and 25. Moreover, *Dvorkin* opens and closes the switches 30 and 70 to allow a cellular signal chain or a PCS signal chain to generate an output signal based on sensing the local oscillator inputs to mixers. The Office Action fails to show that *Dvorkin* uses one or more second amplifiers in response to an “amplified incoming signal” exceeding a “first threshold” and a “desired signal” not exceeding a “second threshold.”

For these reasons, the proposed *Kamgar-Darabi-Talmola* combination and the proposed *Kamgar-Darabi-Talmola-Dvorkin* combination fails to disclose, teach, or suggest all elements of Claims 21, 23, and 25.

Accordingly, the Applicant respectfully requests withdrawal of the § 103 rejections and full allowance of Claims 1-26.

**II. CONCLUSION**

The Applicant respectfully asserts that all pending claims in this application are in condition for allowance and respectfully requests full allowance of the claims.

**SUMMARY**

If any issues arise, or if the Examiner has any suggestions for expediting allowance of this application, the Applicant respectfully invites the Examiner to contact the undersigned at the telephone number indicated below or at *wmunck@munckbutrus.com*.

The Commissioner is hereby authorized to charge any fees connected with this communication (including any extension of time fees) or credit any overpayment to Deposit Account No. 50-0208.

Respectfully submitted,

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